

Chapter 6

Actor-Centered Interest Power Analysis of Participatory Biodiversity Conservation Policy Program in and Around the Bangladeshi Sundarbans

Md. Nazmus Sadath, Carsten Schusser, and Md. Enamul Kabir

Abstract The polders and the adjacent area are the property of the Bangladesh Water Development Board. These polders have a significant role in the socio-environmental situation of the southwestern region of Bangladesh. The presence of the Sundarbans on opposite bank of the rivers makes this situation more important in terms of biodiversity context. Additionally, it is very common to find landless people as settlers along the polders in these particular regions. Although the land belongs to the state, these areas are used as common-pool resources. Hence multiple level stakeholders/actors are involved in the management of the polder areas particularly in respect of plantations. As GIZ has taken a pilot project for the conservation of biodiversity along the polder area in a participatory way, it is imperative to have a stakeholder/actor analysis in terms of interest and power in the pilot area. This study has done the complete network analysis in seven unions (Suterkhali, Rayenda, Southkhali, Ramjannagar, Munshiganj, Burigoalini, and Shyamnagar) of three upazilas (Dacope, Sarankhola, and Shyamnagar). The study found that the local government, local politicians, local beneficiaries, local elites, local NGOs, and upazila administrations are the irreplaceable stakeholders at local level. Water development board and forest administration are the two other irreplaceable actor at national level. These actors dominate the interest power network of participatory biodiversity policy program in and around Bangladeshi Sundarbans. Additionally the present co-management

M.N. Sadath (✉)

Forestry and Wood Technology Discipline, Khulna University, Khulna, Bangladesh

Forest and Nature Conservation Policy and Forest History Institute, Georg August University, Goettingen, Germany

e-mail: mnsadath@yahoo.com

C. Schusser

Forest and Nature Conservation Policy and Forest History Institute, Georg August University, Goettingen, Germany

M.E. Kabir

Forestry and Wood Technology Discipline, Khulna University, Khulna, Bangladesh

strategy of Bangladesh also advocates in favor of the administration-dominated institutions.

Keywords Power • Interest • Actor/stakeholder • Policy program and participatory biodiversity conservation

6.1 Introduction

In the past, many conservation initiatives failed because inadequate attentions have been given to the interests and characteristics of involved stakeholders/actors (Grimble and Wellard 1997). As a consequence, public participation is becoming increasingly embedded in natural resource management and conservation as well as national and international environmental policy, as decision-makers recognize the need to understand who is affected by the decisions and actions they take and who has the power to influence their outcome, i.e., the political actors (Freeman 1984; Rastogi et al. 2010; Young et al. 2013). Stakeholder/actor mapping is very important for any participatory biodiversity conservation policy program, particularly when many public and private actors are involved in the Sundarbans. In this regard, identification and prioritization of interests and power position of each actor/stakeholder are very important to implement the conservation policy program with the co-management approach. According to (Krott 2005), “actor’s/stakeholders’ interests are based on action orientation, adhered to by individuals or groups, and designate the benefits that the individuals or groups can receive from a certain project.” In such way stakeholders’ interest determines their action regarding any project/program/conservation initiative. In addition to interest, actors’ power position also plays a key role within a multistakeholder-involved conservation initiative in and around Sundarbans. According to Arendt (1970) “Power corresponds to the human ability not just to act but to act in concrete.” Mostly every stakeholder has three ways to exercise their power: by coercion, by gaining trust, and/or by providing or withdrawing incentive (Krott et al. 2014). Thereby, it can be said that a comprehensive stakeholder/actor analysis via network analysis is imperative for successful participatory biodiversity conservation program/project. Basing on this concept, this chapter will discuss the interest power relation among the key actors/stakeholder for biodiversity conservation effort in and around the Sundarbans using the Sustainable Development and Biodiversity Conservation in Coastal (Protection) Forests, Bangladesh project (SDBC-Sundarban).

6.2 Theoretical Framework

Policy program is one of the key concepts of this study. Participatory biodiversity conservation has been considered as a policy program for the biodiversity conservation in and around Sundarbans. Hence it is imperative to define “policy program” at the beginning of this theoretical framework. Sadath and Krott 2012 explain that a well-defined “policy program” is consisting of issue, objective, impact, and implementation. Specific issues are considered to be the starting point of a forest policy program, for this case the degrading biodiversity. These issues are generally supported by facts as well as by forecasting simulation, which justifies the requirement for intervention and, hence, the importance of a policy program. When an issue has been authenticated, a program sets its objectives and/or goals to address the problem. In policy terms, a problem can only be defined as such when it is recognized by the state with a basis in facts and with defined objectives and preconditions. A forest policy program may have both formal and informal objectives (Kingdon 2003; Krott 2005). Forest policy programs in tropical countries discuss the degree to which forests should be conserved and how many trees should be planted, for example. The implementation stage clarifies the job distribution, i.e., who should do what for whom in how much time at what place. This stage establishes the responsibility and duty of different actors (stakeholders) related to the program. The implementation stage describes explicitly the policy instruments of a given policy program. Policy instruments are the bundle of techniques by which government authorities exercise their power to attempt to change society’s behavior to obtain the desired impact of fulfilling the policy program objectives attached to a particular issue (Evert 1998; Sadath and Krott 2013). However, according to Krott, policy instruments not only are limited to public policy by governments but also are a political means of intervention that formally influences social and economic action. Etzioni’s threefold classification of policy program implementing instruments “Regulations, Economic means (i.e., financial) and Information” (Evert 1998; Krott 2005) lead us to the actor-centered power concept of Krott et al. Krott’s interest-based actor-centered power theory is fundamental for this study to understand the participatory biodiversity conservation from an interest-driven power relation aspect.

The theory of participatory forest biodiversity conservation talks about returning the forest to the hands of local forest users in order to implement sustainable conservation and management, but it was achieved only in part (Wollenberg et al. 2008; Sikor and Nguyen 2007). As per this ideology, local actors/stakeholders gained influence over their designated forests/ecosystem, but some of the local and even external elites developed dominant influence and can drive the conservation program for their own specific interests (Devkota 2010; Maryudi et al. 2012). Hence every actor tries exercising their power over other actor to shape the outcome of the policy program. In most often cases, the source of power can be either coercion or incentive or trust (Devkota 2010). Coercion builds on the power source of force and according to Hayek 1960:

“altering the behavior of the subordinate by force”. Force works without recognizing the will of the subordinate, therefore we call the social process “induced power.” (Hayek 1960, p. 20)

Force may be applied by causing physical actions, like taking another actor into any type of custody or harming him by using weapons. Excluding any actor from the forest/ecosystem by physical means, e.g., a fence, is also considered to be force or threatening one actor of such actions (Krott et al. 2014).

Incentives are the ways of altering behavior by giving benefits or cash to dominate other actors in perusing the policy program’s outcome in favor. Finally information plays a key role in power process that leads to the third power element: trust. When an actor simply believes information given to them by another actor without checking is termed as trust. Hence trust is also a way of dominating in the policy program actor network.

6.3 Research Framework

A case study approach has been chosen for this study due to the projected complex blend of stakeholders and their interaction with each other and with the environmental situation. To identify the actors and their power elements, a network analysis using quantitative–qualitative method was used and adopted, where the different interactive face-to-face interviews following semi-structured questionnaire with the stakeholders were applied in a sequence design model (Schusser et al. 2012) (see Fig. 6.1).

The sequence design starts with a preliminary quantitative network survey. It aims to identify most of the participating actors, their power, and the most powerful actors. We consider individual persons as well as institutions and organizations if

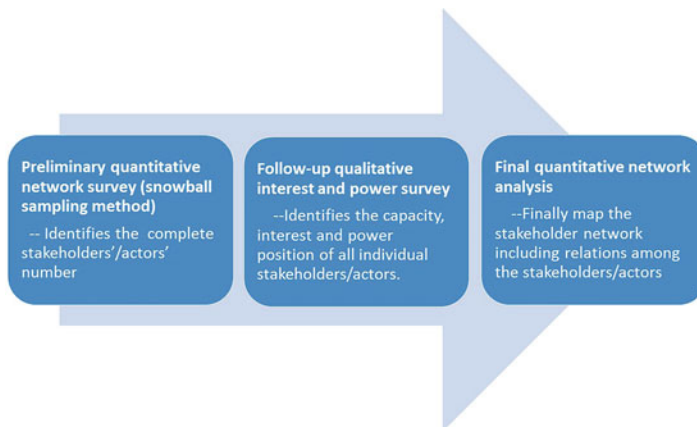


Fig. 6.1 Sequence design model

these have the possibility to intervene any development initiatives by themselves. Semi-structured, in-depth interviews were employed to get interviewees opinions, views, and interpretations of the reality of the actors' power. In the second step, the preliminary findings were enriched through any kind of evidence, e.g., observations and/or documents (Schusser 2013).

Social network analysis (SNA) method was also used to know the interrelationship among the stakeholders. Stakeholder analysis combined with social network analysis can be mutually supportive and address the answer to the question of whether actors perceived as important by others are integrated in the core or periphery of the analyzed process (Lienert et al. 2013). The interest analysis provided the complete information regarding the stakeholders' aspiration from the project. Power position of each stakeholder was analyzed through the function of all sources of power (i.e., coercion, incentive, information, and trust) (Schusser 2013; Kustani et al. 2014). According to Yin (1984), Mitchell (1983), and Neuman (2006), the higher diversity within each case is more important than the higher number of representative cases to draw conclusion on the research question. Additionally, according to Neuman (2006), about 60 in-depth interviews in each representative case area (here each upazila) are good enough to conduct a valid qualitative case study research. Here, a total of 225 open-ended interviews were carried out in the designated pilot study areas of the selected three upazilas where gender representativeness was ensured (at least 75 interviews in each upazila) (please see Table 6.3 for the details). The complete network survey was started from the already identified stakeholder's interviews. The selected three pilot upazilas were Sarankhola, Shyamnagar, and Dacope from Bagerhat, Satkhira, and Khulna district, respectively. Interviews were carried out in Rajapur, Rayenda, and Southkhali Union from Sarankhola Upazila; Ramjannagar, Munshiganj, Burigoalini, and Shyamnagar Union from Satkhira; and Suterkhali Union from Dacope Upazila (Table 6.1). This uneven distribution of interview was due to the location of the pilot polders and involved stakeholders living in the region. The snowball method eventually identified the respondents from different stakeholder groups.

The open-ended interview produces enough information for the qualitative analysis regarding each group of stakeholder's interest, power position, and relation with other involving stakeholders. The following table and maps provided the respective study area with reference to the selected polders for the SDBC project. The snowball sampling method was used in these unions to identify the complete network of stakeholders, which actually lead to few people live outside the pilot

Table 6.1 Field work activities

Sl no.	District	Upazila	Number of stakeholders
1	Khulna	Dacope	75
2	Bagerhat	Sarankhola	75
3	Satkhira	Shyamnagar	75
Total			225

area, even in the upazila, zila, and divisional level. Descriptive statistics like cross tabulation frequency analysis was done for data analysis.

6.4 Stakeholders/Actor Network

This study was able to find out the complete stakeholder network regarding SDBC projects. This network includes the following stakeholders (Table 6.2). Firstly, these stakeholders are categorized among local level, national level, and international level. Within these levels, the identified stakeholders are categorized as public, private, and civil society (Table 6.3). Although the study was conducted at the upazila level, the informants refer few stakeholders who belong to the national and international level. After identifying these stakeholders (Table 6.2), the study analyzes the relation among these stakeholders in terms of their interest, power position, potential collaborating partners, potential conflict situation, and their species choice regarding embankment plantation within the SDBC project's activity boundary.

The data indicates that involvement of the abovementioned actors/stakeholders is important for the success of any participatory biodiversity conservation effort in and around the Sundarbans. However, stakeholders mentioned in the Table 6.3 are irreplaceable, i.e., their active involvement is almost imperative for the success and sustainability of such effort. The mentioned actors can influence the decision-making process of the conservation effort. The forest department owns the forest; hence, they can exercise power through controlling other's access rights to the forest. The individual forest users are the actors who actually operate in the forest and are in the forefront of any biodiversity conservation activity. Local administration, local government, and politicians can also play pivotal role in biodiversity conservation project as they can influence the local forest users and the regional and national policy decision regarding the forest management.

The following figure (Fig. 6.2) shows the actor–network map of SDBC project in three pilot areas. Where it can be observed, the irreplaceable actors are in the central position. The actors belong to the inner center-ward circle are the key stakeholders; actors in the second gray circle are primary stakeholders, and actors in the third outward circle are the secondary stakeholders. The figure also indicates the relationship among the actors. A both-way arrow means a mutual dependency on each other, whereas a single direction arrow means a hegemonic relation among the actor. For example, local government and beneficiaries have a mutual dependency like the politician needs the beneficiaries' vote and the beneficiaries need to be in good book of the local government for aid and supports. Similarly there is relation between the NGO and beneficiaries. In most of the cases, the national actors would try to influence the local context via their local allies. Like a national level, NGO will try to intervene the project via its local branch or other network local NGO. The study reveals one key finding that no stakeholder mentioned Community Management Committee (CMC) as a stakeholder for the SDBC project

Table 6.2 Complete stakeholder list

Local	State/public	Upazila administration
		Forest department range level officers
		Local government
	Private	Individual beneficiaries
		Local politicians
		Local elite (Muscleman/powerful families)
		Local leaders
		Local NGO
		Sawmill owners and timber merchants
	Civil society	Club
Teachers, imam, purohit		
National	State/public	Forest department
		Water development board
		Member of parliament
	Private	Politicians
		NGO
	Civil society	
International		GIZ

Table 6.3 Irreplaceable stakeholders for SDBC projects

Local	State/public	Upazila administration
		Local government
	Private	Individual forest users
		Local politicians
		Local elite (muscleman/powerful families)
Civil society	Local NGO	
National	State/public	Water development board
		Forest administration FD
	Private	
	Civil society	
International		GIZ

or for any biodiversity conservation program. However, at the beginning of the project, it was assumed that CMC could be a key stakeholder. The informants did not signify the role and function of the CMC within the biodiversity conservation program framework. It indicates that the existing co-management committees do not have sufficient institutional framework and power to make/influence decision in biodiversity conservation and forest management. Hence it is clear that the existing CMCs are very much symbolic in nature. Theoretically CMCs should be very important institution for the participatory biodiversity conservation initiatives. Hence we put CMC within the network map in red color. In this study, opinion

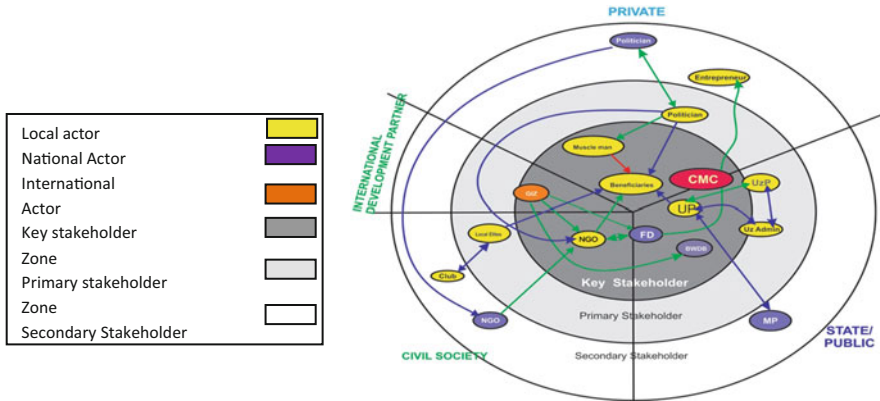


Fig. 6.2 Stakeholder/actor network

functional and powerful CMCs could be a key factor for the success of any participatory biodiversity conservation effort.

6.5 The Stakeholders’ Interest Positions

This study identifies that there is different aspiration among the stakeholders/actors from the Sundarbans ecosystem particularly referring to SDBC project and adjacent embankment plantations (EP). This analysis was carried out within each group of stakeholder. The answers regarding the respondents’ interest are categorized as environment, ecology/biodiversity, economy, protection, aesthetic, and social. When any respondent desire to manage and/or conserve the Sundarbans ecosystem and/or the embankment plantation for betterment of overall environment, then his/her interest was categorized as “environment”; similarly the desire for biodiversity conservation was categorized as “ecology/biodiversity,” desire for monetary benefit is categorized as “economy,” desire for the protection function of the Sundarbans and embankment as “protection,” desire for beautification as “aesthetic,” and desire for social institutional development as “social.” One respondent had the opportunity to opt for multiple answers. The answers of each group of stakeholders are converted to percentages and plotted in the following table (Fig. 6.3). This study reveals that around 80 % of the individual beneficiaries desire economic benefit from the Sundarbans and embankment plantation; their secondary desire is the protection function of the Sundarbans and embankment (44 %), followed by ecology (32 %) and environment (28 %). The local government desires economic (100 %), ecological (100 %), and environment benefits (100 %) from the Sundarbans embankment plantation. The local government’s interest position clearly explains their agenda as the elected members have the aspiration for reelection; they are interested in the common’s interest. Their secondary desires are protection (57 %) and social (57 %).

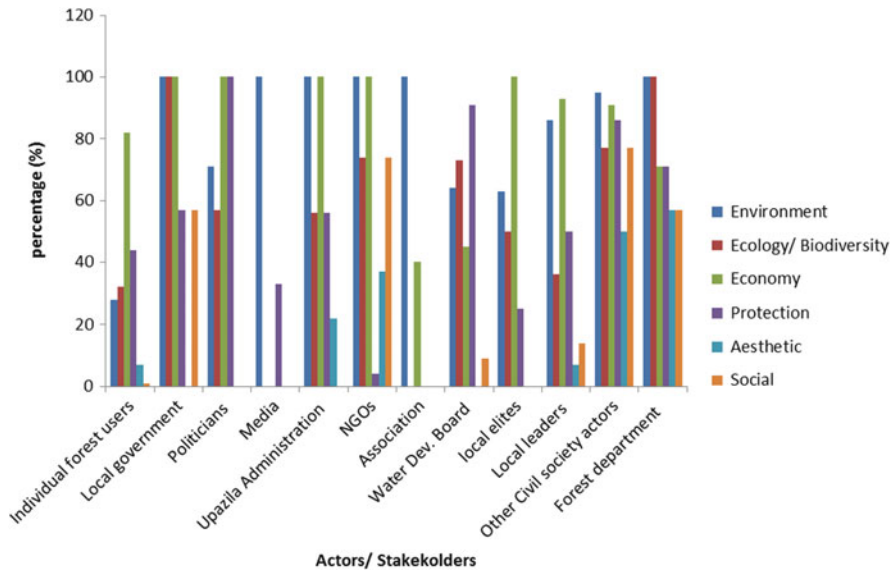


Fig. 6.3 Stakeholders’ interest positions (in percentage)

Administration and NGOs mostly desire economic benefit and environmental benefit (100 %) from the Sundarbans embankment plantation. The analysis reveals that economic benefit is the primary interest of almost all of the stakeholders but other than civil society actors. Their primary interest is environmental services from the Sundarbans and embankment plantation. Water development board’s primary desire is the protection of the embankment. The forest administration is looking for biodiversity conservation and economic benefit for the people. A further qualitative interpretation reveals that forest administration will be happy, if the embankment plantation provides economic benefits and social institutional framework for the people living close to the embankment, because it will lower the pressure on the Sundarbans reserve forest. Additionally the social institution among the settlers will provide them to intervene with different income-generating alternative for these settlers under other development projects. Figure 6.3 shows the different interest position of major stakeholders of SDBC project.

6.6 Power Relationships Among Stakeholders

The study reveals that the local government and local elites (muscleman) are the two most powerful actor/stakeholders for the successful implementation of participatory biodiversity conservation program particularly the SDBC projects embankment plantation. The sources of local government’s power are incentive, trust, and coercion. The local government has an influence over the local forest user who will

eventually look after the embankment plantation. The people living near the embankment are very poor, so time to time they depend on the incentives provided by the local government. Additionally withdrawal of these incentives for this marginal people acts as a coercive force to be influenced by the local government. However as the local government is a locally elected body, they also have a better rapport with peoples at local level hence are usually have the higher level of trust. On the contrary, the local elites' (muscleman) power source is coercion, i.e., informal force and threat to the people. After these two categories of stakeholder, forest department, water development board, and local politicians are powerful actors, who are in position to influence other stakeholders/actors. Any biodiversity conservation project and/or plantation program which is established with collaboration of forest department, the forest department holds the decision-making authority over management of those programs; hence they have the right to withdraw the benefit from the participating individuals. The water development board owns the land where the embankment plantation program has been undertaken, so they also have the similar kind of withdrawal right. Additionally, the water development board also owns the land alongside the rivers bordering the Sundarbans (outside forest area) where substantial forest users live. Depending on the interest position and power position, there may be several coalitions among the stakeholders/actors. As the forest department and water development board both are part of administration of the country; there is a better coordination between them and the international development partner (GIZ). Similarly communication and coordination among the NGOs, individual local beneficiaries, and local government are better. As there are existing and potential coordination among the stakeholders, this study also finds out few conflicts of interest among the stakeholders. Such conflict may arise between the local beneficiaries and local elites (muscleman) over the management of the established plantation, particularly on the resource utilization issues. This study reveals that the major issues for potential conflicts could be the control over the natural resources. Formal powerful actors like forest department will not easily loosen their control of decision-making and management on the SRF, while the participants like local forest users will demand for more and more decision-making role; additionally resources using policy would also become an issue between them. Similarly local politician has the intention to have certain level of control over the forest resources for their own economic benefit and for their followers' economic benefit. The main essences of participatory management could put them in a conflicting position with forest administration and the local forest users. Similarly there might be potential conflict among the different actors upon the control over the forest resource and decision-making regarding the forest management; the following table (Table 6.4) provides the stakeholders' power position, collaboration, and potential conflicts for participatory biodiversity conservation program in and around the Sundarbans.

Table 6.4 Power relationships among stakeholders

Types	Name of the stakeholders	Power position	Source of power	Coordination/ collaboration with	Potential conflict with
Private sector stakeholders	Individual forest users (1)	–		1,5,9,	6,2
	Local elite (2)	+++	Coercion	3	1
	Local politicians (3)	++	Incentive	1,3,4,5,6,7,9,10,11,12,	3,2,9,6,
			Coercion		
	Local leaders (4)	+	Trust	1,3,12,9,10	3
NGO (5)	+	Incentive	1,4,9,10,15		
Public sector stakeholders	Forest department (FD) (range level) (6)	++	Coercion Incentive	8,9,10,15	
	Bangladesh Water Development Board (BWDB) (7)	++		9,6,8,10,15	
	Forest department (FD) (Divisional level) (8)	++	Coercion Incentive	6,9,10,15	1,2,3
	Local government (9)	+++	Incentive	1,3,4,5,6,7,9,10,11,12,	2,3,
			Coercion		
			Trust		
	Administration (10)	+	Coercion	8,9,10,15	
Member of parliament(11)	0	0			
Civil society	Religious institutions (mosque, temple, church, etc.) and leaders (e.g., imam, father, purohit, etc.) (12)	+	Trust	3,9,	
	Club (13)	0		9	
	CMC (14)			6,8,9	2,3
	Media (15)				
Development partner/Donor	GIZ (16)	+	Incentive		

Here a +++ indicates the most powerful actor, ++ indicates powerful actor but can be influenced by others, + indicates list powerful actor, and – indicates powerless actor. 0 indicates statuesque/ no data. In this table, each actor is given a designator number in the second column and then these numbers are used in showing relationship with other stakeholders in terms of collaboration and potential conflict in columns 5 and 6 of the table.

6.7 Final Remarks

Biodiversity in the Sundarbans and vulnerable embankment areas is at risk due to the high population density, illegal settlements on the embankment, and forest user's intensive economic activities, e.g., aquaculture, illegal use of the remaining natural forests, etc. As a result, the embankments are weakened and gradually losing its protective function. This also leads to loss of biodiversity in and around the Sundarbans and emerges as a threat to the ecological balance in the region and the livelihoods of the local population. The adverse consequences of climate change exacerbate additional problem. This analysis provided the vital information regarding the stakeholders/actors involved in participatory biodiversity conservation program in and around the Sundarbans. This study has found out the complete social network for such program, including the stakeholders' interests and power position within the social network. This study recommends that the local government and representing local forest users' institution are key for a successful participatory biodiversity conservation program. This study also found out the powerful local elites and politicians should have a key role in participatory conservation program; without their positive support, the sustainability of such program will be questionable. The prevailing co-management institution provides the platform for all the key actors (both powerful and powerless), however this functionally these institution are very weak. Honestly the powerful governmental actors are not willing to relinquish their hegemony for effective participatory biodiversity conservation program referring to the Sundarbans. In this note the forest policy of Bangladesh needs to address the forest department's decision making hegemony in adopting co-management policy for forest management. Because of this scenario this study could not find any role of CMC (the key intuition of co-management) in the actor centered interest power network. The co-management institutions should be made more efficient and be given with decision making provision. The composing of such institutions is now heavily dominated by administration and politicians. The results of this study suggested that more forest users should represented in the co-management institutions. Additionally policy change in terms of regulatory changes needed to delineate more decision making power and authority to the Co-management institutions.

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